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REMARKS

This Reply is in response to the Final Office Action mailed on January 30, 2006 in which Claims 1-7, 9-17 and 19-21 were rejected. With this response, Claims 7 and 19 are canceled; Claims 7 and 19 are canceled and Claims 6, 10, 11, 14, 15, 20 and 21 are amended. Claims 1-6, 9-17 and 20-21 are presented for reconsideration and allowance.

I. Rejection of Claims 6, 13 and 15-17 under 35 USC 102 (b) Based upon Linker.

Paragraph 3 of the Office Action rejected Claims 6, 13 and 15-17 under 35 USC 102(b) based upon Linker U.S. Patent No. 5,376,790. Claims 6 and 15 are amended to incorporate the limitations of former dependent claims 7 and 19, respectively. Claims 6, 13 and 15-17, as amended, overcome the rejection based on Linker.

Claim 6, as amended, recites a method which includes ascertaining a roughness measurement of a medium surface's roughness from received light energy reflected by reflective member associated with a surface-engaging member. The method further includes using the roughness measurement to adjust one or more printing parameters associated with the printer that is to print upon the medium's surface.

Claim 15, as amended, recites a surface roughness detection device which includes a control system configured to modulate one or more print parameters based upon detected movement of electromagnetic radiation reflected from a surface-engaging member and sensed by a sensor.

Neither Linker nor the prior art record disclose or suggest a method which detects surface roughness of the medium to be printed upon using light or electromagnetic radiation reflected from a surface-engaging member or a reflective member associated with a surface-engaging member, wherein the roughness measurement is used to adjust or modulate one or more printing parameters

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associated with the printer that is to print upon the surface of the medium. As acknowledged by the Office Action in its rejection of Claims 7 and 19, the limitations of which have been incorporated into Claims 6 and 15, respectively,, neither Linker nor Wygant ("Atomic Force Microscope Topographical Explanation of Paper Gloss Anomalies") disclose the modulation or adjustment of one or more print parameters using an ascertained roughness measurement. As a result, the Office Action attempts to additionally rely upon Jackson et al. US 5,934,140.

In its reliance upon Jackson, the Office Action notes that Jackson states "that the various measurements gathered may allow one to enable control of proper paper paths and process parameters, like fuser temperature (col. 8, lines 51-54)." However, the "various measurements" disclosed by Jackson do not include a roughness measurement. In contrast, Jackson merely discloses measurements consisting of curl, thickness, mass, stiffness, thermal diffusivity, coefficient of friction and dielectric constant and resistance. Nowhere does Jackson disclose or suggest modulating or adjusting printing parameters based upon an ascertained roughness measurement. Thus, neither Linker, Wygant nor Jackson, alone or in combination, disclose using an ascertained roughness measurement to adjust one or more printing parameters. Accordingly, Claims 6 and 15, as amended, overcome the rejection based on Linker and is patentably distinct over the prior art of record including Wygant and Jackson. Claim 13 and Claims 16-17 depend from Claim 6 and Claim 15, respectively, and overcome the rejection based upon Linker for the same reasons.

II. Rejection of Claims 1-5, 7, 9-14 and 19-21 35 USC 103(a) Based upon Linker, Wygant and Jackson

Paragraph 5 of the Office Action rejected Claims 1-5, 7, 9-14 and 19-21 under 35 USC 103(a) is being unpatentable over Linker et al. US 5,376,790 in view of "Atomic Force Microscope Topographical Explanation of Paper Gloss Anomalies" (Wygant) and Jackson et al. US 5,934,140. Claims 7 and 19 are canceled. Claims 1-5, 9-14 and 20-21, as amended, overcome the rejection based on Linker, Wygant and Jackson.

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A. Claims 1 and 21

Claims 1 and 21 each recite a printing device including a printer and a position detector configured to ascertain a measure of a print medium surface's roughness using light reflected from a reflective member associated with a surface engaging member.

Neither Linker, Wygant nor Jackson, alone or in combination, disclose or suggest a printing device including a printer and a position detector configured to ascertain a measure of a print medium surface's roughness using light reflected from a reflective member associated with a surface engaging member. As acknowledged by the Office Action, the references to Linker and Wygant both fail to disclose an optical deflection system associated with a printer. (Office Action, page 5).

In an attempt to satisfy the acknowledged deficiencies of Linker and Wygant with respect to Claims 1 and 21, the Office Action points to Jackson and asserts that Jackson discloses such an optical deflection system associated with a printer. However, closer inspection of Jackson reveals that the optical deflection system of Jackson is not configured to ascertain roughness of a print medium. In contrast, embodiment 110a of property sensor 110 of Jackson is merely used to measure sheet thickness and curl. Moreover, Jackson fails to teach the sensing of surface roughness in a printer using any sensing system. Thus, not only do Linker, Wygant and Jackson each fail to disclose an optical deflection system associated with the printer for sensing surface roughness, it would not be obvious to add the atomic force/scanning the probe microscope of either Linker or Wygant to underline and absent Applicant's teaching in the present application. Accordingly, the rejection of Claims 1 and 21 should be withdrawn.

B. Claims 2 and 3

Claims 2 and 3 depend from Claim 1 and are patentably distinct over Linker, Wygant and Jackson for the same reasons discussed above with respect to Claim 1. Claims 2 and 3 recite additional features which further patentably distinguish Claims 2 and 3. Claim 2 further recites a control system configured to modulate one or

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more print parameters in accordance with the measure of the medium surface's roughness. Claim 3 recites that the printing device further includes a parameter manipulator configured to modulate one or more print parameters in accordance with the measure of the medium surface's roughness. As noted above with respect to the rejection of Claims 6 and 15, neither Linker, Wygant nor Jackson, alone or in combination, disclose or suggest sensing a roughness of a surface of a medium to be printed upon and adjusting or modulating one or more print parameters based upon the sensed roughness.

As acknowledged by the Office Action with respect to the rejection of Claim 2, Linker and Wygant each fail to modulate one or more print parameters. As a result, the Office Action once again points to Jackson and asserts that "the various measurements gathered may allow one to enable control of proper paper paths and process parameters, like fuser temperature (col. 8, lines 51-54)." However, the "various measurements gathered" by the various sensors of Jackson do not include surface roughness. Applicant notes that surface roughness and coefficient of friction are not necessarily the same in that two surfaces may have identical levels of roughness but have different coefficients of friction. Since neither Linker, Wygant nor Jackson disclose modulating print parameters using a sense roughness of media, none of these roughness can even provide a motivation or suggestion for their combination so as to result in the modulation of print parameters based upon the sensed roughness. Accordingly, the rejection of Claims 2 and 3 should be withdrawn.

C. Claims 10, 14 and 20

Claims 10, 14 and 20 ultimately depend from Claims 1, 6 and 15, respectively, and overcome the rejection for the same reasons discussed above with respect to Claims 1, 6 and 15. Claims 10, 14 and 20 recite additional features which further patentably distinguish such claims.

Claims 10, 14 and 20, as amended, recite that the one or more print parameters that are being adjusted are modulated are selected from a group of

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parameters consisting of: fusing time, fusing speed, toner concentration, toner developer voltage, toner transfer device voltage, and photosensitive surface charging device voltage.

Neither Linker, Wygant nor Jackson, alone or in combination, disclose or suggest adjusting such parameters using sensed surface roughness of a medium to be printed upon. In contrast, Jackson merely discloses adjustment of fuser temperature. This adjustment is not based upon a sensed surface roughness. Jackson fails to disclose adjusting at least one of fusing time, fusing speed, toner concentration, toner developer voltage, toner transfer device voltage, and photosensitive surface charging device voltage. Accordingly, Claims 10, 14 and 20, as amended, overcome the rejection for this additional reason.

III. Double Patenting Rejection of Claim 12

Paragraph 7 of the Office Action rejected Claim 12 under the statutory type double patenting being a substantial duplicate of Claim 21. In response, Claim 21 is amended to recite that the surface-engaging member is movable. Claim 21 is also amended to remove the limitation that the surface engaging member comprise a flexure material body that is support in a cantilevered disposition proximate apiece a medium. Claim 21 is also amended to recite that the device includes a parameter manipulator configured to manipulate one of more print parameters selected from a group of parameters consisting of fusing time, fusing speed, toner concentration, toner developer voltage, toner transfer device voltage, and photosensitive surface charging device voltage. Claims 12 and 21, as amended, are distinctive from one another. Accordingly, the double patenting rejection of Claims 12 and 21 should be withdrawn.

IV. Obviousness Type Double Patenting Rejection of Claim 1 based on Claims 1,2 and 8 of US Patent No. 6,629,452

Paragraph 9 of the Office Action rejected Claim 1 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 8 of the US Patent 6,629,452. Applicant respectfully disagrees with several of

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the assertions made in support of the obviousness type double patenting rejection. For example, the Office Action takes the position that the feature of a flexure material body, as recited in Claim 1 of the present application, is inherent to the teachings of the structure recited in claims 1 and 2 of US Patent 6,629,452. The Office Action further states that "a cantilever that does not flex would be unable to identify the minute topographical features of the paper and would therefore be an operative."

However, this position is incorrect. Claim 1 of US Patent 6,629,452 does not recite that the surface engaging member is a cantilever. Other non-cantilevered structures or arrangements could also be used to facilitate movement of the surface engaging member to facilitate detection of surface roughness. Therefore, claim 1 of US Patent 6,629,452 does not inherently include a flexure material body that is supported in a cantilevered disposition. Nevertheless, to facilitate prosecution of the present application, a terminal disclaimer is filed here with. Accordingly, the rejection of Claim 1 should be withdrawn.

V. Conclusion.

After amending the claims as set forth above, Claims 1-6, 9-17 and 20-21 are now pending in this application.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 08-2025. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 08-2025. If any

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extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 08-2025.

Respectfully submitted,

Date April 25, 2006

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